Let's talk about TMI...

After three years, what changes can be seen?

March 28, 1982, marks the third anniversary of the Three Mile Island accident. Have there been any significant changes in attitudes or activities in the nuclear community since the accident? Has news of the benefits derived from "TMI lessons learned" begun to offset the initial adverse public reaction to nuclear energy as a result of the accident and publicity?

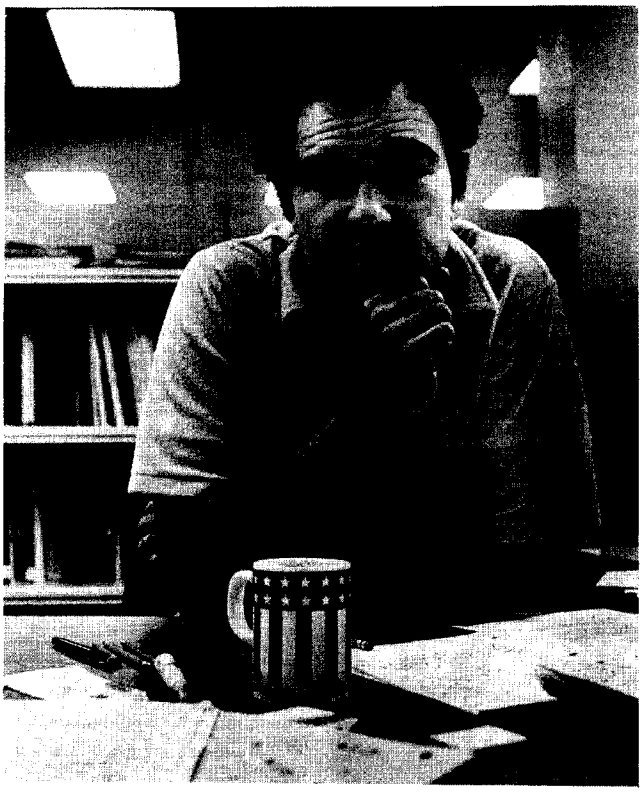
EG&G Idaho employees, who have contributed to related research activities since the TMI accident, gave these comments.

"The nuclear community, I believe, is a bit frustrated by the pace of activities at TMI," says Ken Sumpter. Sumpter is branch manager, TMI Technical Support and Projects and is responsible for coordinating all activities at INEL regarding TMI.

"The financial curtailments are obviously driving the level of resources the utility (General Public Utility) is able to apply to the recovery effort," he continues. "Early this year, the NRC responded to recommendations based on lessons learned from TMI, and made by the GAO, dealing with insurance issues and recovery guidelines. The voluntary insurance program should ease the financial burden caused by future incidents; the recovery guidelines are being studied by the NRC at this time.

Ken Sumpter

Larry Leach, manager of the LOFT Department, says the accident itself was only part of the cause for changes and actions that have occurred since the accident, some of which have been as significant as the accident itself. "The fact that the utility owning Three Mile Island still has not been allowed to restart their other reactor at the site has had a devastating effect on the rest of the industry in terms of the attractiveness of nuclear power as an energy option. No new nuclear power plants have been ordered in the U.S. since the accident, and many have been cancelled. Our research work has been largely redirected toward two extremes of possible reactor accidents—the more likely accidents which involve operator action and the far extreme of what happens if all the systems don't work—instead of on our previous emphasis on the performance of emergency systems."



Dennis Owen

Dennis Owen, senior project engineer, TMI Core Examination, agrees that TMI brought about changes in the nuclear community. "TMI dispelled the attitude held by some people that reactor systems are so redundant that a major accident would probably never occur," states Owen.

And as Russ Heath, manager of Physics Division, explains, "The TMI incident brought both the nuclear community and the public to grips with the reality that accidents can occur which could result in the release and transport of fission product radioactivity to the environment.

"This served to bring into focus the importance of radiological impact in an accident which leads to degradation of the reactor core," Heath says. "If we are to be in a position to predict the risks involved in such accidents, we must have a better technical basis for understanding how fission products might be released and transported under various conditions. I believe that technical credibility is important to public acceptance of the nuclear power option."

"The most visible activity was the establishment of the Institute of Nuclear Power Operations by the nuclear industry," maintains Larry Ybarrondo about the changes in the nuclear community. Ybarrondo is EG&G Idaho associate general manager, Nuclear Technology. "INPO is charged with setting standards for nuclear operations for the utility power plants and then auditing for compliance by the utility to the standards. It is the owner/operator of the nuclear power plant that is ultimately responsible for the quality and safety of nuclear power operations, not the federal or state governments. Therefore, the establishment of INPO by the nuclear industry was a very positive public acknowledgement of that responsibility by industry."

As far as the news of benefits derived from "TMI lessons learned," these were the responses ...

"The nuclear 'community' mostly talks to itself and not the American public," states Ybarrondo. "I believe the average American citizen has very little knowledge of the actions

taken by the government and industry subsequent to TMI to correct deficiencies. Adverse public reaction to nuclear energy will begin to subside when 'we' put into action a credible plan to communicate with the layperson about nuclear energy!

Larry Ybarrondo

"'We' means you, I, nuclear industry personnel and appropriate government officials, all speaking out on why nuclear energy is an important component of America's energy options that will help provide our country with a stable, economical, independent and socially responsible source of energy."

John Dearien, manager of the Water Reactor Research Department, remarks that to assess the impact of the lessons learned from TMI, especially on public reaction, isn't all that easy.

"On the negative side, the Nuclear News mentioned an attack on the Superphenix plant in France, and plant construction in this country is slowing and even terminating as evidenced by WMP-4 and WMP-5. Even with this most publicized outlook, nuclear power is expected to grow from the current level of 56,790 MWe to 157,650 MWe over the next 10 years in the United States.

"During my visits to TMI, I occasionally talk with local residents. This straw poll indicates a desire to get on with the cleanup.

"I will say that one of the biggest lessons learned from TMI is that accidents of this nature have the potential to be of a major financial impact, as opposed to an impact on public safety."

According to Leach, the media treatment of TMI has lead to further misinformation on the part of the public. "Last month's Scientific American reported the results of a recent survey of different groups on the relative safety of nuclear power as compared to about 30 other things such as driving, handguns, air travel, smoking, etc. Two of the three groups ranked nuclear power as the most risky, and the third group, businessmen, ranked it around number eight, where in fact, it is about number 20. (Actually, on a historical basis, it belongs on the bottom of the list as commercial nuclear power has yet to injure a member of the public.) There are a number of reasons for this, and I feel that the industry has to share some of the blame. This is something that I try to do my part on correcting by writing papers and giving talks to concerned groups."

Heath views the public's perception somewhat differently. "I believe that the perceived concern following the TMI incident has weathered the wave of distortion and sensationalism that was associated with TMI. Resulting attention to issues raised by the new national administration and actions taken by NRC have helped to restore public confidence. Both the nuclear utilities and the regulators have profited from TMI in many ways which should produce a broader approach to licensing and safety issues.

And finally Owen, with this comment.

"Unfortunately, no, the news of the benefits derived from TMI has not offset the adverse public reaction to nuclear energy as a result of the accident and publicity. In the public perception, any lessons learned remain overshadowed by the accident itself and the fact that three years later, TMI-2 problems still are in the news."

Russ Heath

John Dearien

Larry Leach